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09/785,000	02/16/2001	Alison Lee	YOR920000110US2	4058

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EXAMINER	
PHAM, HUNG Q	
ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 03/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/785,000	LEE ET AL.	
	Examiner	Art Unit	
	HUNG Q PHAM	2172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-24 are rejected under 35 U.S.C. 101 because the claimed inventions are directed to non-statutory subject matter.

> As disclosed in MPEP, "Data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." Claims to computer-related inventions that are clearly nonstatutory fall into the same general categories as nonstatutory claims in other arts, namely natural phenomena such as magnetism, and abstract ideas or laws of nature which constitute "descriptive material." Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material". In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data. Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. Warmerdam, 33 F3d at 1360, 31 USPQ2d at 1759 (MPEP 2106 (IV) (B) (1)).

In particular, the claimed subject matter of claims 1-24, especially claim 1 is ***a mapping data structure for representing two or more categories***, and instead of a physical or logical relationship description of the categories and subcategories, the limitations are directed to nonfunctional descriptive material: ***each of the categories divided into subcategories of ordered levels of specificity, each of the ordered levels of specificity being a grouping of subcategories of the same levels of specificity.***

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-9, 16-18, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorna et al. [USP 6,029,172].

Regarding to claim 1, Jorna teaches a system for enabling a user person to select a specific information item from a set of information items in an information processing system, the set of information items being organized in a classification scheme comprising a number of categories, at least two of those comprising a number of sub-categories (Abstract, and Col. 1, lines 4-10). Jorna does not explicitly disclose ***a mapping data structure representing two or more categories, each of the categories divided***

into subcategories of ordered levels of specificity, each of the ordered levels of specificity being a grouping of subcategories of the same levels of specificity. However, as shown in FIG. 1, a number of main categories from the highest level of the hierarchy, categories 104, 105 and 106, on a first layer. The display screen 102 also shows a number of categories of the next level down in the hierarchy, e.g. categories 108 and 110, which are sub-categories belonging to category 104 as ***subcategories of ordered levels of specificity, each of the ordered levels of specificity being a grouping of subcategories of the same levels of specificity***. Furthermore, categories of a further level down can be shown, e.g. category 112 (Col. 5, lines 3-41). This technique indicates a hierarchical structure as ***a mapping data structure representing*** categories 104, 105, and 106 as ***two or more categories, each of the categories divided into subcategories of ordered levels of specificity, each of the ordered levels of specificity being a grouping of subcategories of the same levels of specificity.*** Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Jorna system by using a mapping data structure for representing categories and subcategories, and by doing this, a database could be classified based on data relevance.

Regarding to claim 2, Jorna teaches all the claimed subject matters as discussed in claim 1, Jorna further discloses the mapping data structure ***having one or more sections, the sections being logical intersections of one of the categories with one of the levels of specificity*** (Col. 5, line 63-Col. 6, line 19).

Regarding to claim 3, Jorna teaches all the claimed subject matters as discussed in claim 2, Jorna further discloses: ***one or more subcategories having a degree of closeness relating the section to one or more other sections*** (Col. 5, line 42-Col. 6, line 11).

Regarding to claim 4, Jorna teaches all the claimed subject matters as discussed in claim 3, but fails to disclose: ***the degree of closeness relates to any one or more of following: a physical closeness of location of physical items represented by the respective sections, a relational closeness between one or more users and one or more objects, a relational closeness between one or more users, a semantic closeness of descriptions of items represented by the respective sections, a behaviorial closeness of pattern of use***. However, Jorna teaches that: another possibility to implement the ascertaining function is to define a set of parameters for every category and to assign a value to each of the parameters to characterize the category. The ascertaining function then comes down to calculating a value representing the similarity between two categories based on the values of corresponding parameters. When two categories have none or few parameters in common, they are not or weakly related to each other. When categories have many parameters in common, they are more related to each other. A high value for matching parameters indicates a still stronger relationship (Col. 5, line 42-Col. 6, line 11). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Jorna system by using physical closeness of location, relational closeness between users, a semantic closeness of description of items, a behaviorial closeness of pattern for calculating the similarity value in order to

categorize information.

Regarding to claim 5, Jorna teaches all the claimed subject matters as discussed in claim 1, Jorna further discloses: ***the categories include any one or more of the following: a product category, a service category, a category class, a category list, a product class, a list of products in a class, a product specification, a service class, a list of services, and a service specification*** (FIG. 1).

Regarding to claim 6, Jorna teaches all the claimed subject matters as discussed in claim 1, Jorna further discloses: ***the levels of specificity include any one or more of the following: category class, category list, offering specification, product class, list of products in a class, product specification, service class, list of services, and a service specification*** (FIG. 1).

Regarding to claim 7, Jorna teaches all the claimed subject matters as discussed in claim 1, but does not explicitly discloses the system comprising ***one or more nodes located on one or more of the districts***. However, as disclosed by Jorna, some of the data may be at a remote location and the system may be connected to such a location by a network (Col. 7, lines 34-64). Thus, the data in remote locations as ***nodes*** could be in the same or different locations. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Jorna system by

including one or more nodes located on one or more of the districts in order to optimize the capability of the system.

Regarding to claim 8, Jorna teaches all the claimed subject matters as discussed in claim 7, but fails to disclose: ***the nodes are differentiated by any one or more node functions***. However, as discussed in claim 7, the data in remote locations as nodes is for retrieving purpose. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Jorna system by including the technique of differentiating the nodes by node function in order to categorize the nodes in the system.

Regarding to claim 9, Jorna teaches all the claimed subject matters as discussed in claim 8, and further discloses: ***the node functions include any one or more of the following: initiating a chat session, providing information, causing a user to be associated with a node location, providing access to sales information, providing access to a salesman, and changing a browser page to one that has information relating to the node*** (Col. 7, lines 34-64).

Regarding to claim 16, Jorna teaches all the claimed subject matters as discussed in claim 7, but fails to disclose: ***the system comprising one or more paths, each path connecting two or more nodes***. However, a link between two nodes by dial-up access for example is a well-known means for communication in the network. Therefore, it

would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Greef system by including one or more paths for connecting two nodes in order to communicate to in the network.

Regarding to claim 17, Jorna teaches all the claimed subject matters as discussed in claim 16, but fails to disclose: ***the path links two or more of the nodes to associate connectivity relationships among the nodes***. However, as discussed in claim 7, the data in remote locations as nodes is for retrieving purpose. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Jorna system by including the path links for associating connectivity relationships in order to differentiate two nodes in the network.

Regarding to claim 18, Jorna teaches all the claimed subject matters as discussed in claim 16, Jorna further discloses: ***a path is associated with one of the following: a user's path through one or more of the districts, a customer's path through one or more of the districts, a preferred path of a group of users through one or more of the districts, a preferred path of a group of users with common interests through one or more of the districts, and a preferred path of a group of users with complementary interests through one or more of the districts*** (Col. 8, lines 15-19).

Regarding to claim 24, Jorna teaches all the claimed subject matters as discussed in claim 1, Jorna further discloses: ***the information in the mapping data***

structure is server over one or more of the network connections so that one or more visual districts can be displayed on one or more clients (FIG. 1-2, Cols. 5-6).

Regarding to claim 25, 26, and 27, Jorna teaches a method, a computer program product, and a system for enabling a user person to select a specific information item from a set of information items in an information processing system, the set of information items being organized in a classification scheme comprising a number of categories, at least two of those comprising a number of sub-categories (Abstract, and Col. 1, lines 4-10). Jorna further discloses that categories belonging to a certain level are displayed in the corresponding layer in a certain manner that distinguishes them from categories in other layers. This is done by using a particular size of characters identifying a category, a particular font of characters, style of characters, sharpness of characters, color of characters, or a combination of the previous characteristics. In particular the size of characters helps in creating the sensation that the different layers are lying behind one another. As shown in FIG. 2 is the displayed screen after selection of a particular category. When the user enters the system, the categories of the classification scheme move from a virtual horizon to their initial positions in the respective layers of the virtual space (Col. 5, lines 22-49). This indicates the step of ***displaying the subcategories and the grouping of subcategories in a visual, geometric pattern.*** Jorna does not explicitly disclose the steps of ***mapping data representing two or more categories by dividing each of the categories divided into subcategories of ordered levels of specificity; dividing each of the ordered levels of specificity into a grouping of subcategories of***

the same levels of specificity. However, as taught by Jorna, a set of parameters is defined for every category and to assign a value to each of the parameters to characterize the category. The relevance between categories is implemented by using an ascertaining function for calculating a value representing the similarity between two categories based on the values of corresponding parameters (Col. 5, line 61-Col. 6, line 11). As shown in FIG. 1 is a hierarchy of categories and sub-categories. A sub-category at one level will be a category at the next level down, comprising various sub-categories. A layer represents a certain level in the hierarchy of the classification scheme and contains categories belonging to that level. The front layer represents the highest level and contains main categories, the second layer represents the next layer down, whereby the last layer at the back represent the individual information items as contained in the lowest sub-categories (Col. 5, lines 3-22). This technique indicates the steps of ***mapping data representing two or more categories by dividing each of the categories divided into subcategories of ordered levels of specificity; dividing each of the ordered levels of specificity into a grouping of subcategories of the same levels of specificity***. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Jorna system by including the step of mapping data representing categories by dividing the categories into subcategories of ordered level of specificity, and by doing this, a database could be classified based on data relevance.

5. Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorna et al. [USP 6,029,172] in view of American Online, Inc. [AOL.COM].

Regarding to claim 10, Jorna teaches all the claimed subject matters as discussed in claim 7, but fails to disclose: ***one or more of the nodes is a landmark that marks a salient location on one or more of the districts***. AOL is a well-known Internet Service Provider and considered as ***a landmark that marks a salient location on one or more of the districts***. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Jorna system by including one or more nodes is a landmark in order to differentiate the nodes in the networking system.

Regarding to claim 11, Jorna and American Online, Inc. teaches all the claimed subject matters as discussed in claim 10, American Online, Inc. further discloses the Autos as one of categories and considered as ***the salient location is fixed and associated with one of the business categories***.

Regarding to claim 12, Jorna and American Online, Inc. teaches all the claimed subject matters as discussed in claim 10, American Online, Inc. further discloses free chat as ***the salient location can change in time and is associated with an activity***.

Regarding to claim 13, Jorna and American Online, Inc. teaches all the claimed subject matters as discussed in claim 12, American Online, Inc. further discloses: ***the activity is one or more of the following: a current "hot spot", "a list of most popular pages in a computer section", a public chat, a sale, a special product offering, a special service offering, and a sales agent availability.***

Regarding to claim 14, Jorna and American Online, Inc. teaches all the claimed subject matters as discussed in claim 10, American Online, Inc. further discloses: ***the salient location is personally meaningful to the user.***

Regarding to claim 15, Jorna and American Online, Inc. teaches all the claimed subject matters as discussed in claim 14, American Online, Inc. further discloses ***the salient location represents any one or more of the following: a user's buddy, a chat buddy, a private chat, a user's favorite spot, and a user with common interest.***

6. Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorna et al. [USP 6,029,172] in view of Adar et al. [USP 6,493,702].

Regarding to claim 19, Jorna teaches all the claimed subject matters as discussed in claim 7, but fails to disclose: ***one or more node sets, each node set containing one or more nodes clustered in nearby locations in one or more of the districts.*** Adar teaches

a search and recommendation system by using keywords search and category search (FIG. 2). Adar further discloses ***one or more node sets, each node set containing one or more nodes clustered in nearby locations in one or more of the districts*** (Adar, Col. 5, lines 38-57). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Jorna system by including an Intranet in order to optimize the system.

Regarding to claim 20, Jorna and Adar teaches all the claimed subject matters as discussed in claim 19, Adar further discloses: ***a node set represent a relationship among two or more nodes located in one or more of the districts*** (Adar, Col. 5, lines 38-57).

Regarding to claim 21, Jorna and Adar teaches all the claimed subject matters as discussed in claim 19, Adar further discloses: ***where one or more of the node sets is associated with one of the following: a density of users gathered in one or more adjacent node locations, a set of node locations marking results of a search, a set of node locations related by a semantic attribute, a set of node locations visited by a group of users with common interests, a set of node locations visited by a group of users with complementary interests, and a crowd of users*** (Adar, Col. 5, lines 38-57).

Regarding to claim 22, Jorna and Adar teaches all the claimed subject matters as discussed in claim 19, Adar further discloses: ***one or more of the node sets has a node set function*** (Adar, Col. 5, lines 38-57).

Regarding to claim 23, Jorna and Adar teaches all the claimed subject matters as discussed in claim 22, Adar further discloses: ***the node set function includes any one or more of the following: providing information about the set, changing a user's location to be associated with a node location in the set, changing browser page to one that has information relating to a node in the set*** (Adar, Col. 5, lines 38-57).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Pham whose telephone number is 703-605 4242. The examiner can normally be reached on Monday-Friday, 7:00 Am - 3:30 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VU, KIM YEN can be reached on 703-305 4393. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746 7239 for regular communications and 703-746 7238 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305 3900.

Examiner: Hung Pham
February 25, 2003

JEAN M. CORRIELUS
PRIMARY EXAMINER